

PATENT
09/615,039
Docket 019/251c

CLAIM AMENDMENTS

1 to 26. CANCELLED

27. *(Currently amended)* A recombinant virus having a genome in which a promoter polynucleotide is operably linked to a genetic element essential for replication or assembly of the virus,
wherein the promoter polynucleotide hybridizes under stringent conditions to a DNA consisting of 2482 consecutive nucleotides upstream of the transcription initiation site (position 13545) of SEQ. ID NO:1;
wherein the promoter polynucleotide preferentially promotes transcription of the genetic element in cancer cells expressing telomerase reverse transcriptase (TERT), thereby promoting replication of the virus, and
wherein replication of the virus in a cell ~~leads to lysis of the cell~~ such cancer cells leads to cell lysis.
28. *(Previously presented)* The recombinant virus of claim 27, which is a replication-conditional adenovirus.
29. *(Previously presented)* The recombinant virus of claim 27, which is a replication-conditional herpes virus.
30. *(Previously presented)* The recombinant adenovirus of claim 28, wherein the genetic element essential for replication is an adenovirus E1a region.
31. *(Previously presented)* The recombinant virus of claim 27, further comprising an encoding region whose expression is toxic to the cell, or which renders the cell more susceptible to toxic effects of a drug.
32. *(Previously presented)* The recombinant virus of claim 31, wherein the encoding region encodes thymidine kinase, and the drug is ganciclovir.
33. *(Currently amended)* The recombinant virus of claim 27, wherein the ~~promoter polynucleotide is a promoter for telomerase reverse transcriptase~~ sequence of the promoter polynucleotide is at least 90% identical to the sequence from position -2482 to -36 relative to the translation initiation site (position 13545) of SEQ. ID NO:1, or a fragment thereof that promotes transcription in cells expressing TERT.

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34. **CANCELLED**

35. *(Currently amended)* The recombinant virus of claim 27, wherein the promoter polynucleotide comprises a binding site for a transcription regulatory element factor.

36. *(Currently amended)* The recombinant virus of claim 27, wherein the promoter polynucleotide has one or more of the following features:

a) it comprises the sequence from position -117 to position -36 relative to the translation initiation site ~~(position 13545) of SEQ. ID NO:1;~~

b) it comprises the sequence from position -239 to position -36 relative to the translation initiation site ~~(position 13545) of SEQ. ID NO:1;~~

c) it comprises the sequence from position -117 to position +1 relative to the translation initiation site ~~(position 13545) of SEQ. ID NO:1; or~~

d) it comprises the sequence from position -239 to position +1 relative to the translation initiation site ~~(position 13545) of SEQ. ID NO:1 ; or~~

~~e) it hybridizes with a polynucleotide complementary to a sequence having feature a), b), c), or d) under stringent conditions, and has the characteristic of preferentially promoting transcription in cells expressing TERT.~~

37. *(Currently amended)* The recombinant virus of claim 27, wherein the promoter polynucleotide has one or more of the following features:

a) it comprises a sequence of at least about 100 consecutive nucleotides in SEQ. ID NO:1;

b) it comprises a sequence of at least about 500 consecutive nucleotides in SEQ. ID NO:1;

c) it comprises a sequence of at least about 100 consecutive nucleotides in SEQ. ID NO:2;

d) it comprises a sequence of at least about 500 consecutive nucleotides in SEQ. ID NO:2; or

~~e) it hybridizes with a polynucleotide complementary to a sequence having feature a), b), c) or d) under stringent conditions, and has the characteristic of preferentially promoting transcription in cells expressing TERT~~

comprises at least about 100 consecutive nucleotides of SEQ. ID NO:1.

38. *(Currently amended)* The recombinant virus of claim 27, wherein the promoter polynucleotide ~~in the viral genome that preferentially promotes transcription in cells expressing TERT contains no more than 82 consecutive nucleotides~~

comprises a sequence that is at least 90% identical to the sequence from position -117 to position -36 relative to the translation initiation site of SEQ. ID NO:1.

39. **CANCELLED**

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40. *(Previously presented)* A method for producing a recombinant virus according to claim 27, comprising transfecting a cell expressing TERT with: i) a plasmid in which the promoter polynucleotide is operably linked to the genetic element essential for replication or assembly of the virus; and ii) a DNA fragment containing other genetic elements essential for replication or assembly of the virus; and then propagating virus obtained from the cell.
41. *CANCELLED*
42. *(Withdrawn)* A method for killing a cell expressing telomerase reverse transcriptase, comprising contacting the cell with the recombinant virus of claim 27.
43. *(Withdrawn)* The method for killing a cell according to claim 42, wherein the cell is a cancer cell.
44. *(Withdrawn) (Currently amended)* The method for killing a cell according to claim 43, wherein the cancer is selected from ~~the group consisting of~~ lung cancer, pancreatic cancer, medulloblastoma, cervical carcinoma, and fibrosarcoma.
- 45 to 46. *CANCELLED*
47. *(New)* A recombinant virus having a genome in which a promoter polynucleotide is operably linked to a genetic element essential for replication or assembly of the virus,
wherein the promoter polynucleotide hybridizes under stringent conditions to a DNA consisting of the sequence from position -239 to position +1 relative to the translation initiation site (position 13545) of SEQ. ID NO:1,
wherein the promoter polynucleotide preferentially promotes transcription of the genetic element in cancer cells expressing telomerase reverse transcriptase (TERT), thereby promoting replication of the virus, and
wherein replication of the virus in such cancer cells leads to cell lysis.
48. *(New)* The recombinant virus of claim 47, wherein the promoter polynucleotide comprises a sequence at least 90% identical to the sequence from position -239 to position +1 relative to the translation initiation site.
49. *(New)* A recombinant virus having a genome in which a promoter polynucleotide is operably linked to a genetic element essential for replication or assembly of the virus,
wherein the promoter polynucleotide comprises the sequence from position -117 to position -36 relative to the translation initiation site (position 13545) of SEQ. ID NO:1.

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50. *(New)* The recombinant virus of claim 49, which is a replication-conditional adenovirus.
51. *(New)* The recombinant virus of claim 49, which is a replication-conditional herpes virus.